



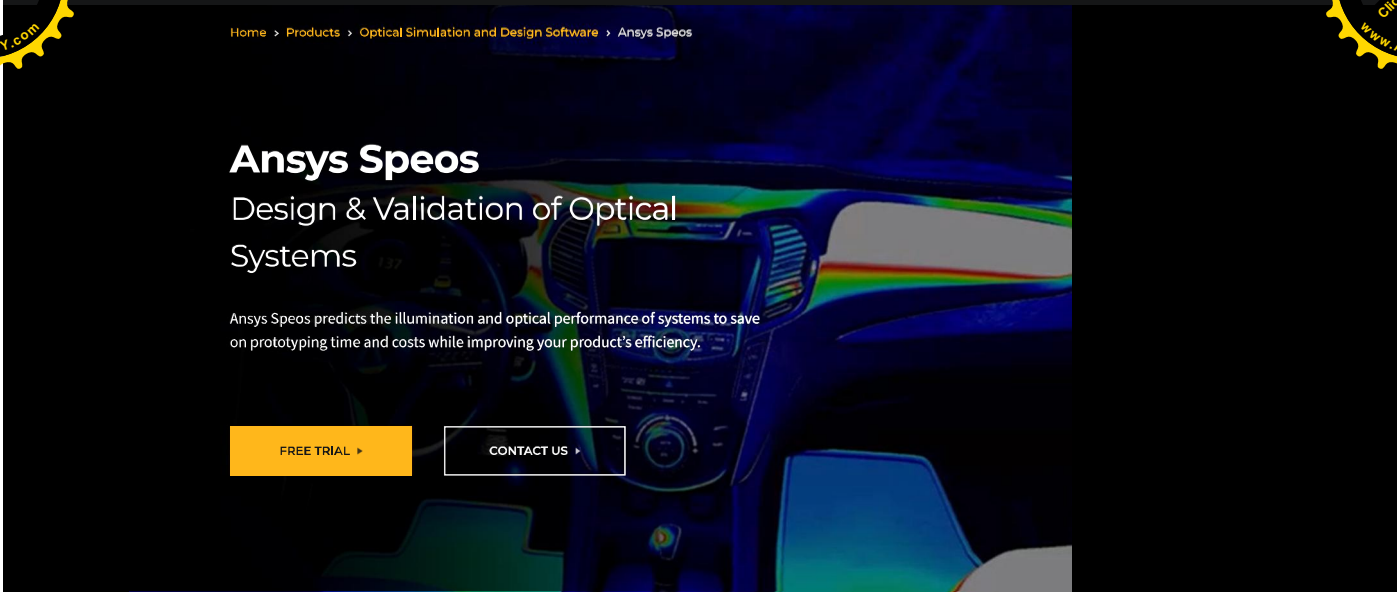
# Ansys Speos

## Design & Validation of Optical Systems

Ansys Speos predicts the illumination and optical performance of systems to save on prototyping time and costs while improving your product's efficiency.

FREE TRIAL >

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### CAPABILITIES

## Design, Optimize and Validate Your Optical System

Turn on the light in your virtual model and intuitively explore the propagation of light in 3D. The Speos Live preview function features simulation and rendering capabilities so you can design products interactively. Cut iteration time and speed up your decision-making process by performing simulations correctly the first time, automatically designing for optical surfaces, light guides and optical lenses. To match your performance specifications, Speos combines powerful light analysis capabilities with illumination evaluation across the electromagnetic spectrum, allowing for high-fidelity visualization based on human vision capabilities. Deploy these visualizations in virtual reality for a fully immersive review experience.



## Capabilities

Ansys Speos optical design software uniquely simulates a system's optical performance and evaluates the final illumination effect, based on human vision.

- Lighting System Modeler
- Lighting System Analyzer
- Human Vision
- Speos Live Preview
- Robust Design Optimization for Optical Design
- Optical Part Design
- Optical Sensor Test
- HUD Design and Analysis
- Far Infrared Extension
- Ansys Speos HPC
- Road Library for Sensors Simulation
- Extensive Optical Library
- Black-box sharing
- GPU Compute



### Lighting System Modeler



Create your system and automate your design with easy-to-use, intuitive expert tools.



### Lighting System Analyzer



Analyze lighting systems and material efficiency — and calculate spectral luminance — extending your analysis from ultraviolet to near infrared.



### Human Vision



Determine visual aspect, reflection, visibility and information legibility according to the human observer. On a screen or in virtual reality, Ansys Speos provides you with a unique visual simulation of your product as it will be seen in its final context.














### Speos Live Preview



Ansys Speos Live preview offers real-time simulations of optical designs, thanks to the computing power of NVIDIA RTX graphics processing units (GPUs).



START YOUR TRIAL >

-  **Robust Design Optimization for Optical Design** (+)  
Optimize optical system lighting performance, determining optimal mechanical and optical design parameters.
-  **Optical Part Design** (+)  
Create dedicated optical geometries for the design of lighting systems using the automated generation of prisms.
-  **Optical Sensor Test** (+)  
Simulate and assess camera and lidar raw signals in a driving environment. Apply smart electronic processing intuitively and enable sensor layout on vehicles.
-  **Black-box Sharing** (+)  
LightField, an Ansys file format, enables black-box sharing between suppliers and their customers.
-  **HUD Design and Analysis** (+)  
Design automotive HUD imaging systems quickly and easily. HUD design and analysis lets you study the technical feasibility of your HUD according to windshield shape and packaging constraints.
-  **Far Infrared Extension** (+)  
Extend the optical simulation wavelength range up to the far infrared. Model thermal radiation directly from the body temperature field.
-  **Ansys Cloud** (+)  
Optical simulation has long been constrained by fixed computing resources available on a desktop or local cluster.
-  **Ansys Speos HPC** (+)  
Complex simulations that demand more computing resources don't pose a problem with Ansys Speos. Speos HPC accelerates high-quality simulation results on demand, providing access to high-performance computing and visualization resources for the quickest virtual prototyping service available.
-  **Road Library for Sensors Simulation** (+)  
This library improves the realism and accuracy of physics-based simulation modeling for autonomous driving.
-  **Extensive Optical Library** (+)  
Select source, material, sensor and standard models in this online resource to gain a physically correct simulation of your digital product.
-  **GPU Computing** (+)  
Dramatically speed up simulations with GPU Compute.



**PROOF POINT**  
CEVT reduces automotive exterior lighting concept development time by 80% using Ansys Speos

\* [READ CASE STUDY](#) >



# Ansys software is accessible

It's vital to Ansys that all users, including those with disabilities, can access our products. As such, we endeavor to follow accessibility requirements based on the US Access Board (Section 508), Web Content Accessibility Guidelines (WCAG), and the current format of the Voluntary Product Accessibility Template (VPAT).

[VIEW VPAT REPORTS](#) ▶

## See What Ansys Can Do For You

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\* = Required Field

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